Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Further Streamlining Part 25 Rules	)	IB Docket No. 18-314
Governing Satellite Services	)	

REPLY COMMENTS OF KYMETA CORPORATION

Kymeta Corporation ("Kymeta") hereby submits its Reply Comments in the above-captioned Notice of Proposed Rulemaking ("NPRM").[1] Kymeta applauds the Commission for its efforts to further streamline Part 25 space station and earth station licensing. Kymeta broadly supports many of the specific proposals in the NPRM. Kymeta also recommends several modifications to the Commission's proposals in order to further clarify and streamline the process.

Kymeta manufactures and sells earth station antennas and terminals, and also bundles earth stations with space segment to provide an integrated satellite service for end-users. As such, Kymeta submits that it brings an important and different perspective to this proceeding. In response to the NPRM, ten parties filed Comments. Eight of these parties are satellite service providers; none are satellite earth station vendors.

I. BACKGROUND

Kymeta is developing the next generation of antennas for satellite communications that will reduce the cost of broadband deployment and enable entirely new uses of, and applications

[1] *Further Streamlining Part 25 Rules Governing Satellite Services,* Notice of Proposed Rulemaking, IB Docket No. 18-314, rel. Nov. 15, 2018, FCC 18-165. All Comments referenced herein were filed on or about March 18, 2019 in response to the NPRM.

for, satellite technology, including mobility applications such as connected cars. Unlocking the full potential of these data links requires an antenna solution that can track satellites, while also being small and light enough to attach to a vehicle. Kymeta's flat panel antennas use software and metamaterials technology to electronically and dynamically steer the antenna beam to track the target satellite. This offers the electronic beam-steering performance of a typical phased array antenna, with much lower power consumption and with less size and weight.

II. THE UNIFIED LICENSING OPTION SHOULD BE AVAILABLE TO ALL EARTH STATIONS

Kymeta supports the Commission's proposal to "create a new, optional, unified license to include both space stations and earth stations …."[2] As the Commission recognized in the NPRM, the adoption of a unified licensing structure for space stations and earth stations "could dramatically simplify how we authorize earth stations" by eliminating repetitive and burdensome information requirements currently imposed on applicants for earth station licenses.[3] Further, the Commission recognized that a unified license "could also expedite the deployment of new earth stations, and therefore services to the public."[4]

A. The Unified Licensing Option Should Be Available To Earth Stations Not Owned By The Satellite Operators

The NPRM specifically recognizes that, in some cases, the earth stations may not be owned by the satellite operators. This is a typical arrangement for many users of satellite services, including Kymeta and its end-user customers. Kymeta strongly supports the Commission's proposal to allow earth station applicants to:

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[2] NPRM at ¶ 1.

[3] *Id.* at ¶ 6.

[4] *Id*. at ¶ 7.

> certify that they will comply with the terms and conditions of the space station network with which the earth station will communicate as a substitute for filing the technical information about the proposed earth station operations currently required to be submitted …."[5]

Likewise, Kymeta supports the Commission's proposal to permit a satellite operator with different ownership than the earth station with which it communicates to:

> use contractual agreements with earth station end users to ensure that [the satellite earth station operator] has the technical and administrative means to guarantee compliance with its network parameters and authorization.[6]

By not requiring a separate earth station license, "a new end user may be able to begin providing service as soon as it had contracted with the satellite operator, without seeking additional Commission approval."[7] This method will be a significant improvement over the current authorization process which requires earth station applicants to file extensive technical data, most of which is repetitive (and in some cases, more burdensome) than the technical data filed by satellite operators. Further, the burden on Commission staff to review such applications will be greatly reduced. The proposal to rely on contractual provisions is a well-tailored solution. It has long been the case that earth station operators must undergo rigorous testing with each specific satellite operator with which their earth stations will communicate. This testing is designed to demonstrate, in real-world conditions, that the earth stations will comply with the operator's internal

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[5] *Id*. at ¶ 11. Accordingly, Kymeta supports SES/O3b on this matter. *See* Comments of SES Americom, Inc. and O3b Limited ("SES/O3b") at 3.

[6] *Id*. at ¶ 7. *Accord,* Comments of SES/O3b at 3 - 4.

[7] *Id*. at ¶ 7.

technical parameters developed to ensure that the operations will not cause harmful interference. These technical parameters complement, and are often stricter than, the Commission's technical rules.

B. The Unified Licensing Option Should Be Available To Earth Stations In Motion ("ESIMs")

Kymeta urges the Commission to confirm that the proposed unified space station/earth station licensing option will be available to both fixed stations and ESIMs. No specific comments were filed regarding this issue; Kymeta believes that many of the commenters simply assumed that ESIMs would be covered by the proposed rules. Kymeta also assumes that ESIMs will be covered, but asks the Commission to confirm this. ESIMs are an essential element in the provision of satellite services, and therefore, the public interest requires that streamlined processing be applied to such earth stations.

C. The Unified Licensing Option Should Be Available To Earth Stations Communicating With NGSO Satellites

Kymeta supports the proposal of WorldVu Satellites Limited ("OneWeb") to extend the unified licensing option to NGSO FSS operators.[8] Kymeta agrees with OneWeb that "there is no compelling reason to treat GSO and NGSO systems differently when implementing a unified licensing regime."[9] As OneWeb notes, the NGSO Report and Order adopted applicable power limits and spectrum sharing rules for NGSO operations.[10] Postponing consideration of extending the unified licensing option to a separate NPRM

[8] Comments of OneWeb at 3 – 5. *Accord*, Comments of SES/O3b at 1 ("SES urges the Commission to … make the [unified licensing] procedure available for [NGSO satellite systems]"); Comments of Maxar Technologies Inc. at 4 - 5.

[9] Comments of OneWeb at 3.

[10] *Id*. at 4 – 5.

will present an unwarranted burden on Commission staff and interested parties, and will unnecessarily delay the availability of streamlined processing to earth stations operating with NGSO satellite systems.

III. THE COMMISSION SHOULD ADOPT OTHER MODIFICATIONS TO EXPEDITE THE INTRODUCTION OF NEW EARTH STATIONS

Kymeta supports the Commission's proposal to permit earth station operators to make minor modifications to licensed earth stations -- modifications that do not increase the risk of interference -- without notification.[11] Kymeta further supports the Commission's proposal to

> clarify that the addition of new transceiver and antenna combinations to an existing blanket earth station license do not require prior Commission notification when they meet the requirements currently listed in Section 25.118(a)(4).[12]

Kymeta also supports Intelsat's proposal that Section 25.118(b) be clarified to:

> permit minor earth station modifications – for which notifications are not required – for equipment operating within emission and other authorized technical limits, and not just for "electrically identical" equipment.[13]

Likewise, Kymeta supports Intelsat's proposal to remove emission designators from earth station licenses and require only the specification of bandwidth.[14] The emission designator information is not necessary to reviewing an earth station application, and, as Intelsat notes, such information is not required as part of the satellite licensing process.[15] These changes and clarifications will relieve earth station operators of outdated and unnecessary burdens.

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[11] NPRM at ¶ 22. *Accord*, Comments of EchoStar Operating Corporation and Hughes Network Systems, LLC ("EchoStar/Hughes") at 8; Comments of Intelsat License LLC ("Intelsat") at 2; Comments of Iridium Communications Inc. ("Iridium") at 2 – 3; Comments of SES/O3b at 8 – 9; Comments of Commercial Smallsat Spectrum Management Association at 4; Comments of Viasat, Inc. ("Viasat") at 11 – 12.

[12] NPRM at ¶ 22; *Accord*, Comments of Iridium at 3; Comments of Viasat at 12.

[13] Comments of Intelsat at 8.

[14] *Id.*

[15] *Id*.

IV. CONCLUSION

For the reasons set forth above, Kymeta urges the Commission to move forward expeditiously to adopt and implement an optional unified licensing system for GSO and NGSO space stations and earth stations.

Respectfully submitted,

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April 16, 2019